

# A Mixed Methods Investigation of Male Juvenile Delinquents' Attributions Toward Violence

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**Abstract:** *In an attempt to understand why youth commit violent acts, Daley and Onwuegbuzie (2004) conducted a study wherein they found that juvenile offenders tend to commit violence attribution errors—defined as negative emotional responses to negative social interactions which then serve as antecedents to at-risk behaviors. The purpose of this mixed methods study was to replicate Daley and Onwuegbuzie's research by examining the causal attributions that male juvenile delinquents use for the violent behaviors of others, as well as the salient pieces of information they use in arriving at their attributions. Participants were 120 incarcerated male juvenile offenders from a correctional facility in a mid-southern state. A mixed methods analysis revealed that the juvenile offenders committed violence attribution errors approximately 53% of the time—identical to Daley and Onwuegbuzie's study. A phenomenological analysis revealed the following seven themes stemming from juveniles' reasons for causal attributions: self-control, violation of rights, provocation, irresponsibility, poor judgment, fate, and conflict resolution. An exploratory factor analysis revealed that these seven themes were represented by three meta-themes. Implications are discussed.*

## Introduction

Although actual violent crime statistics for juveniles have decreased during recent years, youth violence rates continue to remain alarmingly high (Children's Bureau, 2004; Federal Bureau of Investigation, 2006; Federal Interagency Forum on Child and Family Statistics, 2005; National Center for Educational Statistics, 2004; Waytowich & Onwuegbuzie, 2007). In 2002, youth under the age of 18 represented an estimated 2.3 million arrests made by law enforcement agencies (Snyder, Puzanchera, & Kang, 2005). The predominance of juvenile offenses range from misdemeanors, such as throwing rocks (projecting deadly missiles), family fights (domestic battery), school fights (battery), petty theft, trespassing, and destruction of property; to felonies, such as auto theft and criminal acts of violence. The FBI's Uniform Crime Report, Violent Crime Index, identifies criminal acts of violence as homicides, forcible rapes, robberies, and assaults (Snyder et al., 2005). In 2002, 15% of all Violent Crime Index arrests involved juveniles, and for every 10 arrests for murder, one involved a youth under the age of 18 (Snyder et al., 2005). Furthermore, in 2003, more than 17% of youth nationwide carried a weapon to school, and more than 6% carried a gun (Center for Disease Control [CDC], 2004).

The importance of early intervention for preventing the onset of violent behavior is well recognized. Sensationalized incidents across the United States (e.g., Jonesboro, AR, and Littleton, CO) have given further cause for concern regarding profound changes in youth behaviors. There

is particular interest in identifying and addressing mediating factors through which risk may be transformed into behavior—for example, attitudes. The prevalence of violence, and the gap in research regarding youth's attitudes toward violence (Nichols & Good, 2004), represents a significant deficit that demands attention. This necessitates further exploration both of factors associated with at-risk behaviors (Herrenkohl, Hill, Chung, & Guo, 2003) and immutable antecedents of violent behavior, as well as permeable correlates of violence predictor variables (Daley & Onwuegbuzie, 2002/2003).

Despite considerable research on youthful aggression, few studies have examined the role of social cognitive factors—in particular, attributions—in placing children at risk for involvement in acts of violence. Additionally, from a methodological standpoint, these investigations typically have made no attempt to approximate experimental conditions by manipulation of an independent variable. This methodological flaw may have culminated in the difficulties experienced in predicting violent acts (Capaldi & Patterson, 1993; Nichols & Good, 2004; Schlesinger, 1983). However, recently, Daley and Onwuegbuzie (2004) investigated the role that attributions play among male juvenile delinquents. More specifically, these researchers examined male juvenile delinquents' causal attributions for others' behaviors, and the salient pieces of information utilized in arriving at their attributions.

According to Kelley (1973), attribution theory examines the information individuals utilize in making justifications for events that occur within their social and physical environments. Daley and Onwuegbuzie (2004) coined the term "violence at-

tribution errors” to define “errors that occur when an offender does not blame the perpetrator of a violent act (e.g., rape) but instead blames either the victim or the circumstance” (p. 551). Using a mixed method analysis, they found that the juvenile offenders committed violence attribution errors approximately 53 % of the time.

Daley and Onwuegbuzie (2004) recommended that their study be replicated in order to verify the reliability of their findings. Thus, the major purpose of the present research was to replicate their study. More specifically, in the current investigation, as in the study of Daley and Onwuegbuzie (2004), the researchers examined the inaccuracy of causal attributions (i.e., violence attribution errors) made by juveniles for others’ behaviors, and the salient pieces of information they utilize in arriving at their attributions (i.e., reasons for violence attributions). As in Daley and Onwuegbuzie’s (2004) research, another goal of the present inquiry was to develop a typology of reasons for violence attributions and to determine whether these reasons predict juvenile delinquents’ violence attribution errors.

## Method

### Participants

The sample of 120 male juvenile offenders was drawn from the population of juveniles incarcerated at a correctional facility located in a mid-southern state. Thus, the participants were very similar to the sample members in the study of Daley and Onwuegbuzie (2004), except that they were incarcerated at a correctional facility located in a southeastern state. These participants represented all of the available offenders incarcerated at that facility. The juvenile offenders were considered wards of the state; consequently, informed consent to participate in the study was inherent in institutional permission to conduct the research. Formal consent was granted by the Department of Juvenile Justice in the state where the study took place for both researchers to collect data. This sample, which comprised 20.0 % Caucasian-American and 80.0 % African-American boys, ranged in age from 12 to 18. In Daley and Onwuegbuzie’s (2004) investigation, the sample comprised 23.2 % Caucasian-American and 76.8 % African-American boys, who also ranged in age from 12 to 18 years. Thus, with the exception of geographic region, the present sample was very similar to Daley and Onwuegbuzie’s (2004) sample.

### Instruments and Procedure

Participants were administered the Violence Attribution Survey (VAS) (Daley & Onwuegbuzie, 2004), a 12-item questionnaire designed to assess attributions made by the juveniles for the behavior of others involved in a variety of violent acts. Each item consists of a vignette, followed by three possible attributions (i.e., person, stimulus, and circumstance) presented in multiple-choice format, and an open-ended question asking the juveniles to provide their reasons for selecting the response that they did. These vignettes were written in such a way as to allow for the perceived plausibility of any one of the three possible attributions. Because the stimulus and circumstance responses represent attribution errors on the VAS, these two responses should be combined and contrasted to person attributions. That is, responses representing external attributions (i.e., stimulus and circumstance) should be compared to responses indicating dispositional attributions (i.e., person), such that external attributions are given a score of “1”

and dispositional attributions are given a score of 0. Responses to the 12 items of the VAS are summed to produce an index of violence attribution errors (range = 0 - 12), with high scores being indicative of persons who commit a high proportion of violence attribution errors. With regard to content-related validity, the VAS was reviewed by secondary school teachers who assessed the scale for face validity (i.e., the extent to which the VAS items appeared relevant, important, and interesting to the respondent); item validity (i.e., the extent to which the specific VAS items represent measurement in the intended content area of violence attributions); and sampling validity (i.e., the extent to which the full set of items sample the total content area of violence attributions). The VAS also was analyzed for readability using Grammatik 5 (Reference Software International, 1992). The scale was found to be appropriate for readers at a fifth-grade level. With regard to construct-related validity, a factor analysis conducted by the developers revealed a single factor, thereby justifying that total scale scores be used. Local norms for the VAS have been reported by the instrument developers. In particular, VAS scores from 0 to 3 represent low risk for violence attribution errors, scores from 4 to 6 represent moderate risk for violence attribution errors, and scores from 7 to 12 represent high risk for committing violence attribution errors. For the current inquiry, the score reliability, as measured by Cronbach’s alpha, for the VAS was .70 (95 % confidence interval [CI] = .61, .77). A sample item from the VAS appears in the appendix.

### Analysis

Because the VAS generated both quantitative information (i.e., multiple-choice responses) and qualitative responses (i.e., reasons for choosing responses), a mixed methods analysis was undertaken to analyze the data. This analysis involved the use of qualitative and quantitative data-analytic techniques in a complementary manner (cf. Tashakkori & Teddlie, 2003).

Onwuegbuzie and Teddlie (2003) identified the following seven steps of the mixed methods data analysis process: (a) data reduction, (b) data display, (c) data transformation, (d) data correlation, (e) data consolidation, (f) data comparison, and (g) data integration. *Data reduction* involves reducing the dimensionality of the qualitative data (e.g., via exploratory thematic analysis, memoing) and quantitative data (e.g., via descriptive statistics, exploratory factor analysis, cluster analysis). *Data display* involves describing pictorially the qualitative data (e.g., matrices, graphs, charts, lists, networks, rubrics, and Venn diagrams) and quantitative data (e.g., tables, graphs). This is followed (optionally) by the *data transformation* step, wherein quantitative data are converted into narrative data that can be analyzed qualitatively (i.e., *qualitized*) (Tashakkori & Teddlie, 1998) and/or qualitative data are converted into numerical codes that can be represented statistically (i.e., *quantitized*) (Tashakkori & Teddlie, 1998). *Data correlation* involves quantitative data being correlated with quantitized data or qualitative data being correlated with qualitized data. This is followed by *data consolidation*, wherein both quantitative and qualitative data are combined to create new or consolidated variables or data sets. The next step, *data comparison*, involves comparing data from the qualitative and quantitative data sources. *Data integration* is the final step, whereby both quantitative and qualitative data are integrated into either a coherent whole or two separate sets (i.e., qualitative



and quantitative) of coherent wholes. In implementing the four-stage mixed methods data analysis framework, the researchers incorporated five of the seven steps of Onwuegbuzie and Teddlie's (2003) model, namely, data reduction, data display, data transformation, data correlation, and data integration.

**Stage 1 analyses.** The first stage (i.e., exploratory stage) of this analysis involved recoding the multiple-choice responses (i.e., person, stimulus, and circumstance), as noted earlier. That is, external attributions (i.e., stimulus and circumstance) were given a score of 1 and dispositional attributions (i.e., person) were given a score of 0, yielding VAS scores that potentially ranged from 0 to 12, with high scores being indicative of persons who committed a high proportion of attribution errors. These scores then were used to determine the juvenile delinquents' overall violence attribution error rate. This error rate served as what Onwuegbuzie (2003) termed a *manifest effect size* (i.e., an effect size pertaining to observable content). This stage thus involved the first step (i.e., data reduction) of the mixed methods data analysis process.

**Stage 2 analyses.** The second stage (i.e., exploratory stage) consisted of a phenomenological mode of inquiry to examine students' reasons for their attributions (i.e., person, stimulus, and circumstance) (Goetz & Lecompte, 1984). Specifically, a modification of Colaizzi's (1978) phenomenological analytic methodology was utilized to reveal a number of themes relating to the offenders' reasons for their attributions. Consequently, this stage involved the first two steps (i.e., data reduction and data display) of the mixed methods data analysis process.

**Stage 3 analyses.** The third stage (i.e., exploratory and confirmatory stage) of the mixed methods analysis involved utilizing descriptive statistics to analyze the hierarchical structure of the emergent themes. In particular, each theme was *quantitized* (Tashakkori & Teddlie, 1998). Specifically, for each participant, a score of "1" was given for a theme if it represented at least one of the reasons cited for the 12 attributions made on the VAS; otherwise, a score of "0" was given for that theme. That is, for each sample member, each theme was quantitized either to a score of "1" or a "0," depending on whether it was represented in that individual's responses. This dichomotization led to the formation of an *inter-respondent matrix* (i.e., *participant x theme matrix*) containing a combination of 0s and 1s (Onwuegbuzie, 2003). The quantitizing of themes allowed for the computation of an additional *manifest effect size*. Specifically, a *frequency effect size* measure (i.e., frequency of theme within a sample—which can be converted to a percentage—(Onwuegbuzie, 2003) was obtained by calculating the frequency of each theme from the inter-respondent matrix, then converting these frequencies to percentages. These percentages represented the prevalence rate of each theme. The inter-respondent matrix was used to determine the relationship between responses to each theme (i.e., 0 vs. 1) and the violence attribution error rate. Therefore, this stage involved the second, third, and fourth steps (i.e., data display, data transformation, data correlation) of the mixed methods data analysis process. Table 1 and Table 2 illustrate the inter-respondent matrix. Table 1 gives an idea of how an inter-respondent matrix might look for the 120 participants (i.e., juvenile offenders). In this table, it can be seen that each theme has been *quantitized* (Tashakkori & Teddlie, 1998)—either to a score of "1" or

a "0," depending on whether it was represented in that individual's responses. Specifically, if a study participant listed a characteristic that was eventually categorized under a particular theme, then a score of "1" would be given to the theme for the participant's response; otherwise, a score of "0" would be given. Table 2 provides an example, using four participants, of how the inter-respondent matrix is used to compute various effect sizes. Looking at the row totals and percentages, It can be seen from this table that the fourth juvenile offender (i.e., ID 004) provided reasons for violence attributions that contributed to the most themes (i.e.,  $6/7 = 85.7\%$ ), with third juvenile offender (i.e., ID 003) contributing to the least themes (i.e.,  $2/7 = 28.6\%$ ). Examining the column totals reveals that Theme 4 is the most endorsed theme, with all four juvenile offenders endorsing this theme. Thus, the manifest effect size for Theme 4 is 100%. Conversely, the manifest effect size for Theme 1, the least endorsed theme, is 25.0%. Had the sample size been much larger (i.e., containing at least 70 participants, which would yield at least 10 participants per theme), the inter-respondent matrix could have been subjected to an exploratory factor analysis. With a larger sample size, other analyses could have been conducted—particularly those techniques that belong to the general linear model family (e.g., t-test).

**Stage 4 analyses.** The fourth and final stage of the mixed methods analysis involved the utilization of the inter-respondent matrix to conduct an exploratory factor analysis to ascertain the underlying structure of these themes (i.e., exploratory stage). This factor analysis determined the number of factors underlying the themes. These factors, or latent constructs, represented *meta-themes* (Onwuegbuzie, 2003) such that each meta-theme contained one or more of the emergent themes. The trace, or proportion of variance explained by each factor after rotation (Hetzl, 1996), served as a latent effect size (i.e., effect size pertaining to nonobservable, underlying aspects of the phenomenon being studied) (Onwuegbuzie & Teddlie, 2003) for each meta-theme (Onwuegbuzie, 2003). Also, a *manifest effect size* was computed for each meta-theme by determining the combined *frequency effect size* for themes within each meta-theme (Onwuegbuzie, 2003). As such, this stage involved the third, fourth, and seventh steps (i.e., data transformation, data consolidation, and data integration) of the mixed methods data analysis process.

## Results

### Stage 1

Scores on the VAS ranged from 0 to 11, with a mean number of attribution errors of 6.25 (SD = 2.66). The 95% confidence interval (CI) associated with this mean number of attribution errors was 5.75 to 6.74. That is, on average, the juvenile offenders were committing attribution errors 52.7% of the time (SD = 22.15%; 95% CI = 48.6%, 56.8%). With three response options on the VAS, one would expect that the respondents would be 33%. Thus, the attribution rate of 52.7% represents an attribution rate that is approximately 20% above what would be predicted by chance. This difference between the observed (i.e., 52.7%) and chance (i.e., 33.3%) translates to an effect size index of .41 (using Cohen's [1988, pp. 180-183] nonlinear arcsine transformation). Using Cohen's (1988) criteria, this effect size index suggests a moderate effect size.

Table 1

Example of Inter-Respondent Matrix Used to Conduct Mixed Methods Analysis

ID	Theme 1	Theme 2	Theme 3	Theme 4	Theme 5	Theme 6	Theme 7
001	1	0	1	1	0	0	1
002	0	1	1	1	0	1	0
003	0	1	0	1	0	0	1
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
120	0	0	0	1	1	1	1

*Key:* Theme 1 = self-control, Theme 2 = violation of rights, Theme 3 = provocation, Theme 4 = irresponsibility, Theme 5 = poor judgment, Theme 6 = fate, Theme 7 = conflict resolution.

*Note.* If a study participant listed a characteristic that was eventually categorized under a particular theme, then a score of “1” would be given to the theme for the participant’s response; a score of “0” would be given otherwise.

Table 2

Example of How to Use the Inter-Respondent Matrix to Compute Effect Sizes for Four Participants

ID	Theme 1	Theme 2	Theme 3	Theme 4	Theme 5	Theme 6	Theme 7	Total	Percent
001	1	0	1	1	1	0	1	5	71.4
002	0	1	0	1	0	1	0	3	42.9
003	0	0	0	1	0	0	1	2	28.6
004	0	1	1	1	1	1	1	6	85.7
Total	1	2	2	4	2	2	3	16	
%	25.0	50.0	50.0	100.0	50.0	50.0	75.0		

*Key:* Theme 1 = self-control, Theme 2 = violation of rights, Theme 3 = provocation, Theme 4 = irresponsibility, Theme 5 = poor judgment, Theme 6 = fate, Theme 7 = conflict resolution.

Stage 2

Table 3 presents the themes that emerged from the students' violence attribution reasons, alongside their attribution categories, and examples of statements representing each theme. It can be seen from the first column that the following seven themes were extracted from these responses: self-control, violation of rights, provocation, irresponsibility, poor judgment, fate, and conflict resolution. The second column of Table 3 (i.e., Attribution Category) identifies who the respondent blamed for the violent incident (i.e., person, stimulus, or circumstance). The first two themes were associated with the actor's disposition (i.e., person), the middle three themes pertained to the provocation of a target (i.e., stimulus), and the last two themes represented the exacerbating conditions (i.e., circumstance). The third column of Table 3 provides a representative quotation made by a respondent who selected the corresponding attribution category. The fourth and final column indicates the proportion of respondents who endorsed the attribution category.

Stage 3

The prevalence rates of each theme (i.e., [manifest] frequency effect sizes) (Onwuegbuzie & Teddlie, 2003) also are presented in Table 3. Interestingly, the three stimulus themes, namely, provocation, irresponsibility, and poor judgment, were the most frequently endorsed, with more than 70 % of the sample citing one or more reasons that fell into these categories. The two person themes, namely self-control and violation of rights, were the next most frequently endorsed, with 60.0 % and 59.2 % of the offenders providing violence attribution reasons that pertained to these classifications, respectively. Finally, the two circumstance themes, namely fate and conflict resolution, were the least frequently endorsed.

A series of independent samples *t*-tests was utilized to compare juveniles who endorsed each of the seven themes to those who did not endorse these themes with respect to the violence attribution error rate. These results are displayed in Table 4. After applying the Bonferroni adjustment, it can be seen that, compared to their counterparts, (a) juveniles who endorsed the self-control theme tended to make *fewer* violence attribution errors; (b) juveniles who endorsed the violation of rights theme tended to make *fewer* violence attribution errors; (c) juveniles who endorsed the provocation theme tended to make *more* violence attribution errors; and (d) juveniles who endorsed the conflict resolution theme tended to make *fewer* violence attribution errors. The Cohen's (1998) *d* effect sizes pertaining to these differences were large, ranging from .58 to .98.

Stage 4

An exploratory factor analysis was used to determine the number of factors underlying the seven themes. Specifically, a maximum likelihood factor analysis was used (Lawley & Maxwell, 1971). As recommended by Kieffer (1999), the correlation matrix was used to undertake the factor analysis. An orthogonal (i.e., varimax) rotation was used because of the low degree of correlations among the themes. This analysis was used to extract the latent constructs. As conceptualized by Onwuegbuzie (2003), these factors represented *meta-themes*.

The eigenvalue-greater-than-one rule (Kaiser, 1958), used to determine the number of factors to retain, yielded three factors (i.e., meta-themes). The "scree" test (Cattell, 1966) also suggested that three factors be retained. This three-factor solution is presented in Table 5. Using a cutoff correlation of 0.5, recommended by Hair, Anderson, Tatham, and Black (1995) as an acceptable minimum coefficient, it

Table 3

Open-Ended Response Categories With Selected Examples of Significant Statements of Attributions and Endorsement Rates

Violence Attribution Reason Theme	Attribution Category	Example	Endorsement Rate (%)
1. Self-Control	Person	"He should've been able to control himself."	.60.0
2. Violation of Rights	Person	"Nobody wants to be raped."	59.2
3. Provocation	Stimulus	"Tom was picking at him."	73.3
4. Irresponsibility	Stimulus	"Shaq could've covered up his test."	81.7
5. Poor Judgment	Stimulus	"Shouldn't have got drunk."	86.7
6. Fate	Circumstance	"Wrong place at the wrong time."	45.8
7. Conflict Resolution	Circumstance	"They need to work it out."	30.0

Table 4

Means, Standard Deviations, *t*-values, and Effect Sizes Pertaining to Attribution Error Rate Differences for Each Theme

Theme	Endorsers			Non-Endorsers			Effect Size	
	M	SD	n	M	SD	n	<i>t</i>	Cohen's <i>d</i>
Self-Control	5.56	2.67	72	7.42	2.22	42	-3.84*	0.74
Violation of Rights	5.42	2.75	71	7.61	1.85	43	-4.60*	0.89
Provocation	6.80	2.40	88	4.39	2.70	26	4.37*	0.98
Irresponsibility	6.15	2.68	98	6.81	2.54	16	-0.92	0.25
Poor Judgment	6.35	2.63	104	5.10	2.85	10	1.43	0.47
Fate	6.31	2.83	55	6.19	2.51	59	0.81	0.04
Conflict Resolution	5.22	2.68	36	6.72	2.53	78	-2.88*	0.58

\*Statistically significant after the Bonferroni adjustment.

Table 5

Summary of Themes and Structure/Pattern Coefficients From Maximum Likelihood Varimax Factor Analysis: Three-Factor Solution

Theme	Coefficient <sup>1</sup>			Communality Coefficient
	1	2	3	
Irresponsibility	<b>.79</b>	-.05	.02	.35
Poor Judgment	<b>.71</b>	-.28	-.31	.63
Self-Control	<b>.53</b>	.13	.21	.71
Conflict Resolution	.31	<b>.59</b>	-.55	.63
Violation of Rights	.52	<b>.57</b>	.16	.68
Provocation	.45	<b>-.69</b>	-.19	.71
Fate	.34	-.02	<b>.77</b>	.74
Trace	2.09	1.24	1.09	4.42
% of Variance Explained	29.90	17.71	15.64	63.25

<sup>1</sup>Coefficients in bold represent coefficients with the largest effect size within each theme, using a cut-off value of 0.5 recommended by Hair et al. (1995).

can be seen from this table that the following themes contributed significantly to the first factor: irresponsibility, poor judgment, and self-control; the following themes contributed significantly to the second factor: conflict resolution, violation of rights, and provocation; and the following theme contributed significantly to the third factor: fate. Consequently, the first meta-theme (i.e., Factor 1) was labeled *cognitively based stimulus*. The second meta-theme was termed *disposition of actor and interaction with emotionally based stimulus*. Finally, the third meta-theme was represented by *circumstance*. The thematic structure is presented in Figure 1. This figure illustrates the relationships among the themes and meta-themes arising from offenders' reasons for their violence attributions.

The trace revealed that the *cognitively based stimulus* meta-theme (i.e., Factor 1) explained 29.90 % of the total variance, the *disposition of actor and interaction with emotionally based stimulus* meta-theme (i.e., Factor 2) accounted for a further 17.71 % of the variance, and the *circumstance* meta-theme (i.e., Factor 3) explained an additional 15.64 % of the variance. These three meta-themes combined explained 63.25 % of the total variance. Interestingly, the proportion of total variance explained far exceeds that typically explained (i.e., 45 %) in factor solutions (Henson, Capraro, & Capraro, 2004). This total proportion of variance represents a large *latent effect size*. The manifest effect sizes associated with the three meta-themes (i.e., the prevalence rate of each meta-theme based on the juveniles' violence attribution reasons) were as follows: *cognitively based stimulus* (91.7 %), *disposition of actor and interaction with emotionally based stimulus* (90.0 %), and *circumstance* (45.8 %).

## Discussion

The present investigation examined male juvenile delinquents' causal attributions for others' violent behaviors, and the salient pieces of information they utilize in arriving at their attributions, using a four-stage mixed methods analysis. The first stage revealed that the juvenile offenders committed violence attribution errors nearly 53 % of the time. Notably, this attribution error rate was identical to that reported by Daley and Onwuegbuzie (2004). Indeed, many of the findings that emerged in this study were very similar to Daley and Onwuegbuzie's (2004) results, including the number of themes extracted and the endorsement rates of each of these themes. Moreover, these findings are consistent with the results of several studies that have noted aggressive youth are more likely to externalize the causes of antisocial behaviors (Crick & Nelson, 2002). Further, Dodge, Price, Bachorowski, and Newman (1990) found that attributional biases were related to interpersonal aggression in youth with delinquent histories and that these youth were more likely to attribute hostile intent to external causes. Consequently, for some youth, it is their social interactions and their perceptions of these interactions that may lead to attribution errors.

Kelley (1967) postulates that individual and other's behaviors are interpreted based on three kinds of information: consensus, consistency, and distinction. According to Kelley, consensus refers to whether or not others would behave in the same manner relative to the same stimulus; consistency refers to whether the individual would behave in the same way to the same stimulus on other occasions; and distinctiveness refers to whether the individual would

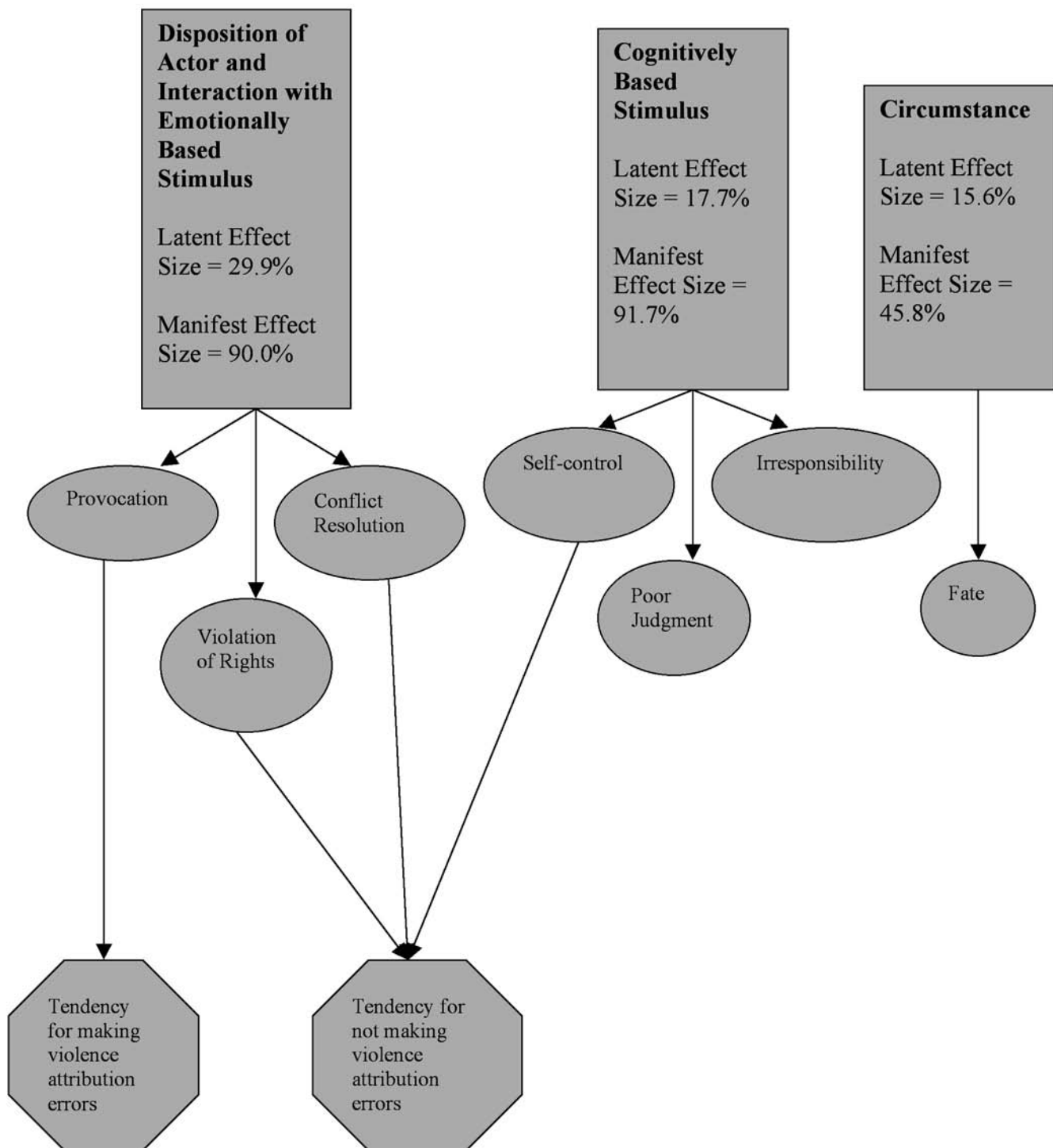
react the same way to other stimuli. Because negative behaviors may have negative implications, there is a motivation for self-protection that contributes to an individual assigning causation of a negative act to an external force (Kelley & Michela, 1980). Therefore, based on consensus, consistency, and distinction, a delinquent youth that has (a) knowledge of others being punished for admitting responsibility for criminal behavior (consensus), (b) knowledge that ownership of criminal behavior is always punished (consistency), and (c) knowledge that an individual's admission of guilt may result in assumptions of other criminal acts (distinction), may deny culpability, thereby externalizing causation of criminal behaviors in an attempt to protect themselves.

The finding regarding the rate of violence attribution errors is particularly informative, albeit disturbing. Moreover, the juvenile delinquents' tendency to commit violence attribution errors might explain, at least in part, their prison status. Indeed, Daley and Onwuegbuzie (2002/2003) documented that violence attribution errors are antecedents to other at-risk behaviors. Specifically, these researchers found that the number of violence attribution errors made was associated significantly with the following violent attitudes, experiences, or behaviors: believing that men have a right to expect sex from women, having friends who died violently, and bringing a gun to school. Notwithstanding, future research should investigate further this potential link between violence attribution errors and violent crime.

Building on Daley and Onwuegbuzie's (2002/2003) findings, Daley and Onwuegbuzie (2004) proposed what they termed a *cue-attribution-emotion-behavior-attribution* cycle, wherein juvenile delinquents tend to make violence attribution errors following negative social encounters, culminating in negative emotions and then at-risk behaviors, which, in turn, adversely affect future violence attributions. According to their conceptualization, the more negative encounters experienced by a juvenile, the more likely he is to believe that he is a victim of society, and any ensuing violent behaviors would reflect this belief system.

The second purpose of the present inquiry was to develop a typology of reasons for violence attributions, as well as to determine whether these reasons predict juvenile delinquents' violence attribution errors. The phenomenological analysis (Stage 2) and effect-size analysis (Stage 3) revealed the following seven themes that were extracted from juveniles' reasons for their causal attributions: self-control, violation of rights, provocation, irresponsibility, poor judgment, fate, and conflict resolution. The first two themes were associated with the actor's disposition (i.e., person), the middle three themes pertained to the provocation of a target (i.e., stimulus), and the last two themes represented the exacerbating conditions (i.e., circumstance). This finding suggests that juveniles' violence attribution reasons are multidimensional in nature. Daley and Onwuegbuzie (2004) extracted the same seven themes. Remarkably, the order of endorsement of these seven themes in both studies was identical, wherein the three stimulus themes, namely, poor judgment, irresponsibility, and provocation, respectively, were the most frequently endorsed, with approximately three-fourths or more of the offenders citing one or more reasons that fell into these categories. Consequently, stimulus (i.e., person) causal attributions appear to be most responsible for violence attribution errors. Alternatively stated, juvenile delinquents

Figure 1. Thematic structure pertaining to juvenile delinquents = reasons for their violence attributions.





appear to blame the victim much more often than they blame the perpetrator. Of the three stimulus reasons cited, the adolescents' perception that the victim should be blamed for being subjected to a violent act because the victim had provoked the actor (e.g., laughing at the actor) was the best predictor of violence attribution error. Specifically, juveniles who endorsed the provocation theme tended to make significantly *more* violence attribution errors than did their counterparts. In contrast, offenders who tended to cite attribution reasons that related to both person themes (i.e., self-control and provocation) tended to make fewer violence attribution errors.

The exploratory factor analysis (Stage 4) revealed that the seven themes fell into the following three meta-themes: *cognitively based stimulus* (comprising irresponsibility, poor judgment, and self-control), *disposition of actor and interaction with emotionally based stimulus* (comprising conflict resolution, violation of rights, and provocation), and *circumstance* (comprising fate). Interestingly, the *cognitively based stimulus* was the most prevalent meta-theme, providing a further explanation for the high incidence of violence attribution errors among youth. The results from the exploratory factor analysis are similar, but not identical, to those of Daley and Onwuegbuzie (2004). These researchers found that the seven themes fell into the following four meta-themes: *disposition of actor and interaction with stimulus* (comprising self-control, violation of rights, and conflict resolution); *cognitively based stimulus* (comprising irresponsibility and poor judgment); *emotionally based stimulus* (comprising provocation); and *circumstance* (comprising fate). Again, the *cognitively based stimulus* was the most prevalent meta-theme. On close examination, it can be seen that the only difference between the two sets of structural thematic relationships is that in the present inquiry, the themes associated with *disposition of actor and interaction with stimulus* and *emotionally based stimulus* fell into the same category.

The use of mixed methods techniques helped to increase the internal validity of the findings by combining an estimation of the prevalence of violence attribution errors with a typology of the salient pieces of information that juveniles utilize in arriving at their attributions. Nevertheless, the current study is limited by the fact that the sample represented juvenile delinquents from a geographically restricted region. Thus, it is not clear the extent to which the present findings can be generalized to juvenile offenders from other geographic regions. However, the fact that the results from this study are so closely aligned with (i.e., replicate) those from Daley and Onwuegbuzie's (2004) investigation adds incremental validity to their conclusion that violence attribution errors play an important role for juvenile delinquents.

Although there are many contributing factors that influence the type and extent of youth violence, the greater the understanding of the profile of youthful offenders, the greater the ability to gain insights into appropriate interventions. The identification of at-risk factors and offender characteristics assists programs in mitigating potential concurrent and consecutive deviant behaviors by enabling the development of effective treatment interventions. The benefits of identifying differential pathways that contribute to delinquent behavior are immeasurable for the formulation of future treatment modalities. Understanding how the detection of these attributes can be incorporated into correctional practice ultimately will yield more

effective correctional interventions and treatments. Thus, the identification of the contributing role that violence attribution errors play in the predilection toward violent behavior will assist in enhancing the individual treatment options for youthful offenders. Furthermore, the current research, alongside that of Daley and Onwuegbuzie (2004), provides evidentiary support to substantiate effective program interventions that promote attribution retraining targeting the antecedents of at-risk behaviors while developing more adaptive responses that may be effective in ameliorating future attribution errors. It is hoped that further investigations build on these two studies by creating such interventions.

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## Appendix

### Sample Item From the Violence Attribution Survey

1. John, who enjoys reading and looking at pornographic books and films, was walking home late one night and decided to take a shortcut down a dark alley. Kim had just finished up her shift as a cocktail waitress and had not changed out of her revealing blouse and short, tight-fitting skirt. She, too, had decided to take a shortcut and had stopped in the deserted alleyway to smoke a cigarette. John saw Kim and raped her.

Who or what can be blamed for this event?

- (a) John
- (b) Kim
- (c) the situation (time, place, etc.)

Why did you choose this answer?

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